

## **Product Information**

Electrical Isolation System

**Casting Compound**

**Bectron<sup>®</sup> EP 5503**

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Epoxy  
Casting Compound:

Hardener:

**Bectron® EP 5503**

**Bectron® EH 5908**

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| <ul style="list-style-type: none"> <li>➤ Moulding compounds of very high thermal stability</li> <li>➤ Thixotropic</li> <li>➤ Hard moulding compounds</li> <li>➤ Good adherence to various substrates</li> </ul> |
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## General

The Bectron® EP 5503 is a cold-hardening two-component system free from solvents. After curing with the Hardener Bectron® EH 5908, it results in a hard moulding compound.

## Application

The Bectron® EP 5503 with the Hardener Bectron® EH 5908 is suited for moulding of electric machinery and equipment, such as stators, rotors, magnet coils and transformers. The cured moulding compound exhibits very high stability of shape at high temperatures (acc. to Martens), and is therefore preferred for service at elevated operating temperatures. Such a high thermal stability is reached after final heat treatment of the moulding compounds (for approx. 2 hrs.) at increased temperature, about the Martens level. In its mixed condition ready-for-application, the Bectron® EP 5503 is thixotropic, i.e. flow through narrow gaps of a moulded component is largely prevented until the mixture has cured, since the moulding compound/hardener mixture exhibits higher resistance in rest than during casting.

## Properties

- as delivered:

	<b>EP 5503</b>	<b>EH 5908</b>
Colour	blue	yellow, transparent
Specific gravity @i 20 °C (DIN EN ISO 2811-1) [g/cm³]	1,18 +/- 0,05	1,00 +/- 0,05
Viscosity @i (DIN 53019) 5 l/s, 25°C [mPas]	22500+/- 2500	140+/- 10

- of mixture:

	<b>EP 5503</b>
Mixing ratio (parts by weight) Bectron® EP 5503 : Hardener Bectron® EH 5908	100 : 18-20
Mixture viscosity at 20 °C (DIN 53019) [mPas]	6,000 ± 1,500
Spec. gravity at 20 °C (DIN EN ISO 2811-1) [g/cm³]	1.14 ± 0.02

- moulding compound:

	<b>EP 5503</b>
Shore D hardness (DIN 53505)	85
Bending strength (DIN 53452) [N/mm <sup>2</sup> ]	85
Tensile strength (DIN 53455) [N/mm <sup>2</sup> ]	59
Resistance to thermal deformation (DIN 53458) acc. to Martens [°C]	110
Glass transition temperature [°C]	122
Absorption of water (30 days at 20 °C) [%]	0.7
Dielectric strength (DIN 53481) [kV/mm]	
– at 20 °C	32
– at 100 °C	30
Dielectric constant $\epsilon_r$ at 50 Hz (DIN 53483)	
– at 20 °C	3.8
– at 50 °C	4.0
Volume resistivity [ $\Omega \times \text{cm}$ ] (DIN 53482)	
- at 20 °C	$10^{16}$
- at 50 °C	$4 \times 10^{14}$
- at 100 °C	$10^{12}$

## Processing

**Physiological data:** Please try to avoid direct contact of your hands both with individual components and with the mixture as such. Never clean your hands with solvents, because solvents withdraw the natural fat from your skin and open the way for hazardous matter to enter your skin pores. Further, we point out the data set forth in the EU Safety Data Sheets.

It is recommended to use protective ointments.

**Pretreatment:** The components to be moulded should be clean, dry and free from grease and fat.

**Mixing:** The Bectron<sup>®</sup> EP 5503 and the Hardener Bectron<sup>®</sup> EH 5908 should be brought together in the mixing ratio specified. The compound is ready-for-application immediately after intensive stirring.

**Application:** The processing time of this epoxy casting compound at room temperature is limited, like that of all cold-hardening systems, and is influenced by the starting temperatures of the components and the exothermal reaction curve. These factors are of importance above all for manual processing.

**Curing:**

	at room temperature
Bectron <sup>®</sup> EP 5503	18 hrs.

<b>Auxiliary products</b>	•Treatment of moulds:	Mould Release Agent 7590 S
	•Cleaning of equipment and tools:	Bectron <sup>®</sup> AC 93

**Shelf life** At least for 6 months if stored properly (room temperature) in the closed original container.

<b>Container sizes</b>	Bectron <sup>®</sup> EP 5503:	can @ 20 kg
	Hardener Bectron <sup>®</sup> EH 5908:	can @ 1 kg, 5 kg

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